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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|-------------|----------------------|---------------------|------------------|
| 10/717,191 | 11/20/2003 | Michel Cantin | 16820-1US CMB/clb | 6232 |
| 20988 | 7590 | 05/10/2006 | EXAMINER | |
| OGILVY RENAULT LLP 1981 MCGILL COLLEGE AVENUE SUITE 1600 MONTREAL, QC H3A2Y3 CANADA | | | PUNNOOSE, ROY M | |
| | | ART UNIT | | PAPER NUMBER |
| | | | | 2877 |
| DATE MAILED: 05/10/2006 | | | | |

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | | |
|------------------------------|------------------------|---------------------|--|
| Office Action Summary | Application No. | Applicant(s) | |
| | 10/717,191 | CANTIN ET AL. | |
| | Examiner | Art Unit | |
| | Roy M. Punnoose | 2877 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 05 August 2004.
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-44 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) 29-44 is/are allowed.
- 6) Claim(s) 1-28 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) Notice of References Cited (PTO-892)
- 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 8/5/2004
- 4) Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) Notice of Informal Patent Application (PTO-152)
- 6) Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 101

1. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

2. Claims 1-28 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

3. Claim 1 is rejected because it is claiming a non-tangible result. Claim 1 directed to a method comprising obtaining the height mapping of the object by comparing the phase value to a reference phase value associated to the reference surface. Basically it is claiming a result based on manipulation of two variables, the variables being a first intensity and a second intensity, without disclosing any specific method of manipulation, or without providing any tangible output or tangible result. Please refer to In re Warmerdam (CA FC) 31 USPQ2d 1754.

4. Claim 2 is rejected for the same reasons of rejection of claim 1 above and additionally because projecting intensity pattern onto the object and measuring the intensities does not constitute or provide any tangible result.

5. Claim 3 is rejected for the same reasons of rejection of claim 1 above and additionally because the limitation of height mapping comprising the relief of the object does not constitute or provide any tangible result.

6. Claim 4 is rejected for the same reasons of rejection of claim 1 above and additionally because the limitation of reference phase value comprising a phase value generated from the extrapolation of a portion of the phase value characterizing the object does not constitute or provide any tangible result.

7. Claim 5 is rejected for the same reasons of rejection of claim 1 above and additionally because the limitation of the reference phase value comprising a computer generated virtual phase value does not constitute or provide any tangible result.

8. Claims 6-28 are rejected for the same reasons of rejection of claim 1 above and additionally because the limitations of each of the claims does not constitute or provide any tangible result. They consist of several abstract ideas and manipulate them together and do not contribute anything tangible to the claimed subject matter.

Allowable Subject Matter

9. Claim 29 is allowable because, prior art of record taken alone or in combination, fails to disclose or render obvious an apparatus comprising a pattern projection assembly for projecting onto the object an intensity pattern characterized by a fringe contrast function $M(x,y)$, $M(x,y)$ as disclosed in the specification, and computing means for calculating a phase value characterizing the object using said intensity acquired for said each selected positions, in combination with the rest of the limitations of claim 13.

10. Claims 30-44 are allowable because they are dependent on independent claims 29, or an intermediate claim, and they include all the allowable limitations of the parent claim(s).

Contact/Status Information

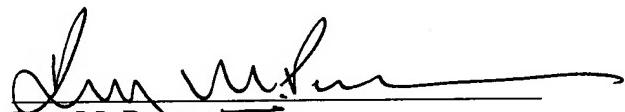
11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Roy M. Punnoose** whose telephone number is **571-272-2427**.
The examiner can normally be reached on 9:00 AM - 5:30 PM.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, **Gregory J. Toatley, Jr.** can be reached on **571-272-2800 ext.77**. The fax phone number for the organization where this application or proceeding is assigned is **571-273-8300**.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

April 03, 2006



Roy M. Purnoose
Patent Examiner
Art Unit 2877